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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/852,126	Applicant(s) DOAK ET AL.
	Examiner Almis R Jankus	Art Unit 2671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-16,18-98,114 and 115* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *38-47,63-76 and 84-98* is/are allowed.

6)☒ Claim(s) *1,3-16,18-37,48-52,55,58-62,77-80,114 and 115* is/are rejected.

7)☒ Claim(s) *53, 54, 56, 57, 81-83* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1, 7, 8, 9, 11, 13, 14, 16, 20, 21, 62 and 114-115 are rejected under 35 U. S. C. 103 (a) as being unpatentable over U.S. Patent No. 6,362,817 to Powers et al (Powers) in view of Foley et al., "Computer Graphics: Principles and Practice" (Foley) further in view of U. S. Patent No. 6,414,679 to Miodonski et al. (Miodonski).

a. Referring to claim 1, Powers discloses reading map data from a data store, the map data comprising component identifying data and component position data for at least one of said components (column 27, lines 14-19; column 6, lines 5-7; Fig. 3B) and reading component data for the at least one identified component from a data store, the component data including at least 3D geometry data for the component (column 27, lines 14-19; column 19- lines 63-67; column 20, lines 61-64; column 21, line 10 - column 22, line 45). Powers further teaches a plurality of 3D components, at column 3 lines 58-63; internal geometry data, at column 5 lines 54-67; and joining the components, at the abstract with, for example, walls fusing together to provide a longer wall. Powers does not explicitly disclose transforming the 3D geometry data of the at least one component using said component position data to provide 3D virtual environment data defining a substantially contiguous 3D surface enclosing said 3D virtual environment. Foley discloses transforming 3D geometry data of at least one component using said component position data (page 280, paragraphs 1 and 2;

Fig. 6.59). Miodonski discloses 3D virtual environment data defining a substantially contiguous 3D surface enclosing said 3D virtual environment (Fig. 17; column 16, line 66 - column 17, line 7). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to further modify the method of Powers by transforming 3D geometry data and defining a surface enclosing the 3D environment as taught by Foley and Miodonski. The suggestionimotivation for doing so would have been because it is natural to define an object in it own coordinate system and then transform it to a new world-coordinate system (Foley, page 223, paragraph 3) and because large, unbounded 3D environments are difficult to navigate (Miodonski, column 1, lines 55-61).

b. Referring to claim 114, Powers discloses internal 3D geometry data defining rooms, at column 31 lines 49-64.

c. Referring to claim 7, Powers discloses 3D geometry data (column 21, line 10 -column 22, line 45). Powers does not explicitly disclose wherein said plurality of components comprises data for generating visible surface portions of said contiguous 3D surface enclosing said 3D virtual environment. Miodonski discloses wherein plurality of components comprises data for generating visible surface portions of said contiguous 3D surface enclosing said 3D virtual environment (Fig. 17; column 16, line 47 - 49).

d. Referring to claim 8, Powers discloses combining game operation-related data for components identified in the map data to operationally link parts of the 3D

virtual environment derived from different components (column 4, lines 7-10; column 25, line 59 - column 26, line 9).

e. Referring to claim 9, Foley discloses transforming data using position data (page 280, paragraphs 1 and 2; Fig. 6.59).

f. Referring to claim 11, Powers discloses wherein said game operation-related data includes navigation data defining a plurality of linked positions and defining links between position in parts of the 3D virtual environment derived from different components (column 4, lines 7-10; column 25, line 59 - column 26, line 9).

g. Referring to claim 13, Powers discloses reading component set data identifying a said set of 3D components for use in generating said 3D virtual environment data (column 27, lines 14-19; Fig. 5).

h. Referring to claim 14, Powers discloses reading map data from a data store, the map data comprising component set data identifying a said set of 3D components for use in generating said 3D virtual environment data, component identifying data and component position data for said 3D components (column 27, lines 14-19 and 42-46; column 6, lines 5-7; column 19; lines 63-67; column 20, lines 61-64; Fig. 3B); reading from a data store component data for the identified components from the identified set, the component data including at least 3D internal geometry data for the components (column 27, lines 14-19 and 42-46; column 6, lines 5-7; column 21, line 10 - column 22, line 45; column 5 lines 54-67); and combining the data to provide 3D virtual environment data for

said 3D virtual environment (column 28, lines '7-9). Powers does not explicitly disclose transforming the 3D geometry data using said component position data. Foley discloses transforming the 3D geometry data using said component position data (page 280, paragraphs 1 and 2; Fig. 6.59).

i Claim 16 is rejected with the rationale of the rejection of claim 1. Claim 16 recites the additional limitations of a data memory storing component data and operable to store map data; and instruction memory storing processor implementable instructions and a processor operable to read and process data from the data memory. Powers discloses the aforementioned limitations (Figs. 1 and 2; column 8, line 56- column 9, line 9).

j. Claim 115 is rejected with the rationale of the rejection of claim 114.

k. Referring to claim 20, Powers discloses wherein the 3D geometry data comprises data for generating visible 3D geometry of the 3D virtual environment (column 27, lines 14-19; column 28, lines 7-9; Fig. 4A) and wherein the component data included additional game operation-related data for defining an operational aspect of the game (column 4, lines 7-10; column 25, line 59 - column 26, line 9); and wherein the stored instructions further comprise instructions for controlling the processor to combine the game-operation related data for components identified in the map data to operationally link parts of the 3D environment derived from different components (column 4, lines 7- 10; column 25, line 59 - column 26, line 9).

l. Claim 21 is rejected with the rationale of the rejection of claim 14. Claim 21 recites the additional limitations of a data memory storing map data; instruction memory storing processor implementable instructions; a processor operable to read and process data from the data memory. Powers discloses the aforementioned limitations (Figs. 1 and 2; column 8, line 56- column 9, line 9).

m. Claim 62 requires a computer readable medium for controlling a computer. Powers teaches this at column 5.

2. Claims 3-6, 15, 18, 19, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Powers in view of Foley further in view of Miodonski as applied to claims 1, 2, 16 further in view of U. S. Patent No. 6,646,641 to White et al. (White)

a. Referring to claim 3, Powers does not explicitly disclose reading the non-interfaced version of the geometry data for the interface portion of a component where the component is joined to another component at the interface portion. White discloses reading the non-interfaced version of the geometry data for the interface portion of a component where the component is joined to another component at the interface portion (column 11, line 52 - column 12, line 10; Figs 8A-8D). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the method of Powers by reading the non-interfaced version of the geometry data as taught by White. The

suggestion/motivation for doing so would have been because transforming objects would increase efficiency (White, column 3, lines 4-6).

b. Referring to claim 4, Miodonski discloses wherein the 3D components comprise a set of components at least a first subset of which share substantially matching interfaced versions of interface portion geometry (Fig. 9; Fig. 17).

c. Referring to claim 5, Miodonski discloses wherein the set of 3D components comprises a second subset of components with matching interface geometry data, at least one component having two interface portions (column 16, lines 45-53; Fig. 9A). White discloses first and second versions of geometry matching the interface geometry (column 11, line 52 - column 12, line 10).

d. Referring to claim 6, Powers does not explicitly disclose wherein the map data includes plug data for closing an interface portion of the component or transforming the plug data. White discloses plug data for closing an interface portion (column 11, line 52 -column 12, line 10; Figs 8A-8D). Foley discloses transforming 3D geometry data using said component position data (page 280, paragraphs 1 and 2; Fig. 6.59).

e. Referring to claim 15, Powers discloses reading map data from a data store, the map data comprising component identifying data and component position data for said 3D components (column 27, lines 14-19; column 6, lines 5-7; Fig. 3B); reading component data for the identified components from a data store, the component data including 3D internal geometry data for components (column 27, lines 14-19; column 19; lines 63-67; column 20, lines 61-64; column 21, line 10 -

column 22, line 45; column 5 lines 54-67); and combining the transformed data to provide 3D virtual environment data for data for said 3D virtual data (column 28, lines 7-9). White discloses creating plug data for a component with one or more interfaces (column 11, line 52 - column 12, line 10; Figs 8A-8D). Foley discloses transforming 3D geometry data using said component position data (page 280, paragraphs 1 and 2; Fig. 6.59).

f Claim 18 is rejected with the rationale of the rejection of claim 3.

g. Claim 19 is rejected with the rationale of the rejection of claim 6.

h. Claim 22 is rejected with the rationale of the rejection of claim 15.

3. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Power in view of Foley further in view of Miodonski as applied to claim 8 further in view of U. S. Patent No. 6,014,145 to Bardon et al. (Bardon).

a. Referring to claim 10, Powers does not explicitly disclose including collision geometry data. Bardon discloses including collision geometry data (column 2, lines 51-54). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify the method Powers to include collision geometry data as taught by Bardon. The suggest ion/motiivation for doing so would have been because it would help the user stay focused and relate to the paths the user seeks to travel (Bardon, column 2, lines 10-20.

4. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Powers in view of Foley further in view of Miodonski as applied to claim 8 further in view of Luebke et al., "Portals and Mirrors: Simple, Fast Evaluation of Potentially Visible Sets" (Luebke).

a. Referring to claim 12, Powers does not explicitly disclose a view portal associated with an interface portion of the component for determining portions of the 3D virtual environment to render for viewing, wherein said game-operation related includes portal data defining a said view portal and wherein a single portal is associated with a part of the 3D virtual environment deriving from joining the interface portions of two said components. Luebke discloses a view portal associated with an interface portion of the component for determining portions of the 3D virtual environment to render for viewing, wherein said game-operation related includes portal data defining a said view portal and wherein a single portal is associated with a part of the 3D virtual environment deriving from joining the interface portions of two said components (page 2, paragraphs 1 and 2; page 1, Fig. 2). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the method of Powers by including view portals as taught by Luebke. The suggestion/motivation for doing so would have been because it would provide increased performance (Luebke, Abstract).

5. Claims 24, 25, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Powers as applied to claims 23, 35, in view of White.

a. Referring to claim 24, Flowers does not explicitly disclose providing data for two versions of at least the interface portion of each building block, a first version in which the interface is closed and a second version in which the interface is open or selecting from the first and second version of the block according to whether the block is to be joined to a neighboring block. White discloses providing data for two versions of at least the interface portion of each building block, a first version in which the interface is closed and a second version in which the interface is open or selecting from the first and second version of the block according to whether the block is to be joined to a neighboring block (column 11, line 52 - column 12, line 10; Figs 8A-8D). At the time the invention was made it would have been obvious to one of ordinary skill in the art to modify the method of Powers by creating a first and second version of the block and selecting according to whether the block is to be joined to a neighboring block as taught by White. The suggestion/motivation for doing; so would have been because transforming objects would increase efficiency (White, column 3, lines 4-6).

b. Referring to claim 25, Flowers does not explicitly disclose wherein the data for each building block includes visible geometry data for visible rendering of an internal space defined by the building block, wherein the first and second versions of the block interface data comprise first and! second versions of said visible geometry and wherein said second versions of a plurality of the building block interface portions defined by the block interface data of a plurality of said

blocks match to provide a susbstantially contiguous visible internal geometry where blocks are joined. White discloses wherein the data for each building block includes visible geometry data for visible rendering of an internal space defined by the building block, wherein the first and second versions of the block interface data comprise first and second versions of said visible geometry and wherein said second versions of a plurality of the building block interface portions defined by the block interface data of a plurality of said blocks match to provide a susbstantially contiguous visible internal geometry where blocks are joined (column 11, line 52 - column 12, line 10; Figs 8A-8D).

c. Claim 36 is rejected per claim 35 with the rationale of the rejection of claim 24.

6. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Powers in view f White as applied to claim 25 further in view of Luebke.

a. Referring to claim 26, Powers does not explicitly disclose wherein the data for each block further comprises viewing portal data for use in determining portions of the 3D environment defined by the blocks which can be neglected when processing portions of the 3D environment for visible rendering. Luebke discloses wherein the data for each block further comprises viewing portal data for use in determining portions of the 3D environment defined by the blocks which can be neglected when processing portions of the 3D environment for visible rendering (page 2, paragraphs 1 and 2). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify the

method of Powers by including viewing portal data as taught by Luebke. The suggestion/motivation for doing; so would have been because it would provide increased performance (Luebke, Abstract).

7. Claims 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Powers in view of White as applied to claim 24 further in view of Luebke yet further in view of Bardon.

a. Referring to claim 27, Powers does not explicitly disclose wherein the data for each building block further includes collision geometry data defining geometry for use in determining collisions of the computer game character with features of the 3D virtual environment, and wherein the data for said first and second versions of at least the interface portion of each block defines first and second versions of said collision geometry. White discloses first and second versions of at least the interface portion (column 11, line 52 - column 12, line 10; Figs 8A-8D). Bardon discloses associating collision data with geometry for use in determining collisions (column 2, lines 51-57). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify the method Powers to include collision geometry data as taught by Bardon. The suggestion/motivation for doing so would have been because it would help the user stay focused and relate to the paths the user seeks to travel (Bardon, column 2, lines 10-20.

b. Referring to claim 28, Powers does not explicitly disclose wherein the data for each building block further includes visible geometry data and wherein, for the first, closed version of said interface portion of a block, the collision geometry is at least partially defined using said visible geometry data. Bardon discloses wherein the collision geometry is defined using said visible geometry data (column 2, lines 51-57; Fig. 3).

8. Claims 48 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Powers in view of Foley further in view of Bardon.

a. Referring to claim 48, Powers disclose reading the map data (column 27, lines 14-19; column 6, lines 5-7; Fig. 3B). Powers does not explicitly disclose transforming the visual geometry into world space or transforming the invisible control data. Foley discloses transforming data into world space (page 280, paragraphs 1 and 2; Fig. 6.59). Bardon discloses incorporating invisible control data (column 2, lines 51-57; Fig. 3). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify the method of Powers by transforming data into world space and incorporating invisible control data as taught by Foley and Bardon. The suggestion/motivation for doing; so would have been because it would help the user stay focused and relate to the paths the user seeks to travel (Bardon, column 2, lines 10-20) and because it is natural to define an object in it own coordinate system and then transform it to a new world-coordinate system (Foley, page 223, paragraph 3). Claim 48 recites

the additional limitations of a data memory storing component data and operable to store map data; and instruction memory storing processor implementable instructions and a processor operable to react and process data from the data memory. Powers discloses the aforementioned limitations (Figs. 1 and 2; column 8, line 56- column 9, line 9).

b. Referring to claim 50, Powers discloses inputting data for selecting tile data for said set of predetermined 3D tiles form tile data for a plurality of sets of 3D tiles, each tile within a set having tile data defining interface features for interfacing to the other tiles, the interface features of each tile substantially corresponding to interface features of at least one tile in each other set of 3D tiles (column 27, lines 42-54; Figs. 3A and 4A).

9. Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Powers in view of Foley further in view of Bardon as applied to claims 48 and 48 further in view of White.

a. Referring to claim 49, Powers does not explicitly disclose wherein the tile data includes plug visual geometry data whereby the tile data provides data defining at least two versions of visual geometry for each tile, a first version in which an interface to the tile is closed by a visual plug defined by the plug visual geometry data and a second version in which an interface to the tile is open for joining the tile to another tile. White disclose includes plug visual geometry data whereby the object data provides data defining at least two

versions of visual geometry for each object, a first version in which an interface to the object is closed by a visual plug defined by the plug visual geometry data and a second version in which an interface to the object is open for joining the object to another object (column 11, line 52 - column 12, line 10). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the method of Powers by defining two versions of geometry and including plug data as taught by White. The suggestion/motivation for doing so would have been because transforming objects would increase efficiency (White, column 3, lines 4-6).

10. Claims 58 and 61 rejected under 35 U.S.C. 103(a) as being unpatentable over Miodonski as applied to claim 51 in view of Powers.

a. Referring to claim 58, Miodonski does not explicitly disclose including constructional element identification data and constructional element position data for a plurality of elements, specifying positions of said predetermined constructional elements in the structure. Powers discloses disclose including constructional element identification data and constructional element position data for a plurality of elements, specifying positions of said predetermined constructional elements in the structure (column 27, lines 14-19; column 6, lines 5-7; Fig. 3B). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify the method of Miodonski by including constructional element identification data and constructional element position

data as taught by Powers. The suggestion/motivation for doing so would have been because it would provide a simple, efficient and versatile system for modeling 3D environments (Powers, column 4, lines 42-46).

b. Referring to claim 51, Miodonski discloses representing said 3D constructional elements to a user (Fig. 9A); inputting instructions from the user for assembling the elements into a structure in which the elements are connected at the interface, the structure representing the virtual 3D environment (column 12, lines 55-59) representing the structure to the user (Fig. 9A and Fig. 17); and storing structure data representing the structure on a storage medium for constructing the virtual 3D environment (Fig. 1). Miodonski does not explicitly disclose a data memory, a processor, or an instruction memory. Powers discloses a data memory, a processor, or an instruction memory (Fig. 2B).

11. Claim 59 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miodonski in view of Powers as applied to claim 58 and 77 further in view of U.S. Patent No. 5,414,801 to Smith et al. (Smith).

a. Referring to claim 59, Miodonski does not explicitly disclose including connection data specifying connections between constructional elements in the structure. Smith discloses including connection data specifying connections between constructional elements in the structure (Fig. 6). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify the method of Miodonski by specifying connections between

constructional elements in the structure as taught by Smith. The suggestion/motivation for doing so would have been because it would allow a user to efficiently move through a three-dimensional space (Smith, column 3, lines 55-57).

12. Claim 78 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miodonski as applied to claim 77 in view of Smith.

a. Referring to claim 78, Miodonski does not explicitly discloses connection data for each element, for determining whether the at least one interface connects to another element. Smith discloses connection data for each element, for determining whether the at least one interface connects to another element. (Fig. 6).

Claim Rejections - 35 USC § 102

1. Claims 23, 29-35, 37 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by U. S. Patent No. 6,362,817 to Powers et al (Powers).

a. Referring to claim 23, Powers discloses inputting position data defining a set of relative positions for the blocks (column 9, lines 43-63; Fig. 3A and 4A); and joining the internal geometry interfaces of the blocks using said position data

to generate a 3D virtual environment defined by a plurality of blocks (Fig. 4A; column 10, lines 32-40; column 5 lines 54-67; abstract).

b. Referring to claim 29, Powers discloses linking navigation positions of joined blocks to facilitate navigation between blocks (column 4, lines 7-10; column 25, line 59 - column 26, line 9).

c. Referring to claim 30, Powers discloses retrieving said 3D internal geometry for each block; and using the 3D internal geometry data for the blocks to generate the 3D virtual environment (column 28, lines 7-9; column 27, lines 14-19; column 20, lines 61-64).

d. Referring to claim 31, Powers discloses inputting data identifying said specified set of building blocks (column 27, lines 42-49).

e. Referring to claim 32, Powers discloses wherein each visually different version of at least one of the types of building block has data defining at least one item position for use in placing an item with the 3D virtual environment, the item position having associated item position identifier data, the item positions in the different versions of the block having substantially the same item position identifier whereby an item for the identified item position can be positioned in the block whichever version of the type of building block is selected (column 9, lines 43-64; Fig. 3A).

f. Referring to claim 33, Powers discloses selecting a set of building block data for said plurality of building blocks form a plurality of sets of data for said building blocks (column 27, lines 42-49).

g. Referring to claim 34, Powers discloses wherein the data for each of said plurality of building blocks has a version for each of said sets of building blocks, and wherein the one or more interfaces of each version of a said building block are defined by the data as being located in substantially similar relative positions in each version of said building block (column 9, lines 43-64; Fig. 3A; column 27, lines 42-49).

h. Claim 35 is rejected with the rationale of the rejection of claim 23. Claim 35 recites the additional limitations of a data memory, and instruction memory and a processor. Powers discloses the aforementioned limitations (Fig. 213, column 8, lines 56-66).

i. Claim 37 is rejected with the rationale of the rejection of claim 32.

2. Claims 51, 52, 55, 60, 77, 79, 80 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Miodonski.

a. Referring to claim 51, Miodonski discloses representing said 3D constructional elements to a user (Fig. 9A); inputting instructions from the user for assembling the elements into a structure in which the elements are connected at the internal geometry interface, the structure representing the virtual 3D environment (column 6 lines 40-64; column 9 line 55 to column 10 line 8; column 11 lines 51-58; column 12, lines 55-59) representing the structure to the user (Fig. 9A and Fig. 17); and storing structure data representing the structure on a storage medium for constructing the virtual 3D environment (Fig. 1).

b. Referring to claim 52, Miodonski discloses inputting set selection data for selecting a said set of elements (column 23, lines 61-65); and storing said set selection data on the storage medium in association with said structure data (Fig. 1); whereby data is provided specifying the construction of one of a set of said virtual 3D environments from the selected set of constructional elements (Fig. 9).

c. Referring to 55, Miodonski discloses inputting item placement instructions from the user (Fig. 21) and storing item placement data corresponding to said item placement instructions on said storage medium in association with said structure data (Fig. 24).

d. Referring to claim 60, Miodonski discloses representing said structure to the user as substantially 2D elements located on a grid, said 2D elements representing said 3D constructional elements (Fig. 9A).

e. Referring to claim 77, Miodonski discloses data for use in constructing a virtual 3D environment from predetermined constructional elements (Fig. 9A), each constructional element having at least one interface for connecting the element to another of said predetermined elements (Fig. 9A), the data structure defining an arrangement of said elements and comprising constructional element identification data and constructional element position data for each of a plurality of said elements (Figs. 3 and 19).

f Referring to claim 79, Miodonski discloses a plurality of sets of elements, each

set having corresponding interfaces (Figs. 8B and 9A, the data structure further comprising set data specifying a said set of elements for use in constructing the virtual 3D environment (Figs. 3 and 4).

g. Referring to claim 80, Miodonski discloses comprising object placement data for use in determining the placement of objects within the virtual 3D environment (Fig. 3).

Allowable subject matter

1. Claims 53, 54, 56, 57, and 81-83 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

2. Claims 38-47, 63-76, 84-98 are allowed.

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Almis R Jankus whose telephone number is 703-305-9795. The examiner can normally be reached on M-F, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Zimmerman can be reached on 703-305-9798. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AJ

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